

## Zeners

### 1N4370A - 1N4372A 1N746A - 1N759A

#### Absolute Maximum Ratings \* T<sub>A</sub> = 25°C unless otherwise noted

| Symbol                            | Parameter                                            | Value       | Units |
|-----------------------------------|------------------------------------------------------|-------------|-------|
| P <sub>D</sub>                    | Power Dissipation<br>@ TL ≤ 75°C, Lead Length = 3/8" | 500         | mW    |
|                                   | Derate above 75°C                                    | 4.0         | mW/°C |
| T <sub>J</sub> , T <sub>STG</sub> | Operating and Storage Temperature Range              | -65 to +200 | °C    |

\* These ratings are limiting values above which the serviceability of the diode may be impaired.

Tolerance = 5%



#### Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise noted

| Device  | V <sub>Z</sub> (V) @ I <sub>Z</sub> = 20mA (Note 1) |      |      | Z <sub>Z</sub> (Ω) @ I <sub>Z</sub> = 20mA | I <sub>ZM</sub> (mA)<br>(Note 2) | I <sub>R</sub> (μA) @ V <sub>R</sub> = 1V |                        |
|---------|-----------------------------------------------------|------|------|--------------------------------------------|----------------------------------|-------------------------------------------|------------------------|
|         | Min.                                                | Typ. | Max. |                                            |                                  | T <sub>a</sub> = 25°C                     | T <sub>a</sub> = 125°C |
| 1N4370A | 2.28                                                | 2.4  | 2.52 | 30                                         | 150                              | 100                                       | 200                    |
| 1N4371A | 2.57                                                | 2.7  | 2.84 | 30                                         | 135                              | 75                                        | 150                    |
| 1N4372A | 2.85                                                | 3.0  | 3.15 | 29                                         | 120                              | 50                                        | 100                    |
| 1N746A  | 3.14                                                | 3.3  | 3.47 | 28                                         | 110                              | 10                                        | 30                     |
| 1N747A  | 3.42                                                | 3.6  | 3.78 | 24                                         | 100                              | 10                                        | 30                     |
| 1N748A  | 3.71                                                | 3.9  | 4.10 | 23                                         | 95                               | 10                                        | 30                     |
| 1N749A  | 4.09                                                | 4.3  | 4.52 | 22                                         | 85                               | 2                                         | 30                     |
| 1N750A  | 4.47                                                | 4.7  | 4.94 | 19                                         | 75                               | 2                                         | 30                     |
| 1N751A  | 4.85                                                | 5.1  | 5.36 | 17                                         | 70                               | 1                                         | 20                     |
| 1N752A  | 5.32                                                | 5.6  | 5.88 | 11                                         | 65                               | 1                                         | 20                     |
| 1N753A  | 5.89                                                | 6.2  | 6.51 | 7                                          | 60                               | 0.1                                       | 20                     |
| 1N754A  | 6.46                                                | 6.8  | 7.14 | 5                                          | 55                               | 0.1                                       | 20                     |
| 1N755A  | 7.13                                                | 7.5  | 7.88 | 6                                          | 50                               | 0.1                                       | 20                     |
| 1N756A  | 7.79                                                | 8.2  | 8.61 | 8                                          | 45                               | 0.1                                       | 20                     |
| 1N757A  | 8.65                                                | 9.1  | 9.56 | 10                                         | 40                               | 0.1                                       | 20                     |
| 1N758A  | 9.50                                                | 10   | 10.5 | 17                                         | 35                               | 0.1                                       | 20                     |
| 1N759A  | 11.40                                               | 12   | 12.6 | 30                                         | 30                               | 0.1                                       | 20                     |

**V<sub>F</sub> Forward Voltage = 1.5V Max @ I<sub>F</sub> = 200mA**

#### Notes:

1. Zener Voltage (V<sub>Z</sub>)

The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T<sub>L</sub>) at 30°C ± 1°C and 3/8" lead length.

2. Maximum Zener Current Ratings (I<sub>ZM</sub>)

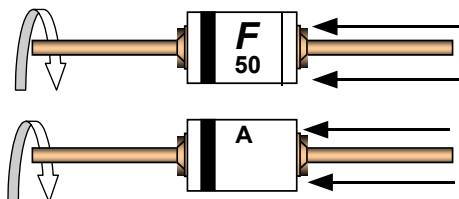
The maximum current handling capability on a worst case basis is limited by the actual zener voltage at the operation point and the power derating curve.

Zeners 1N4370A - 1N4372A 1N746A - 1N759A

## Top Mark Information

| Device  | Line 1 | Line 2 | Line 3 |
|---------|--------|--------|--------|
| 1N4370A | LOGO   | 37     | 0A     |
| 1N4371A | LOGO   | 37     | 1A     |
| 1N4372A | LOGO   | 37     | 2A     |
| 1N746A  | LOGO   | 46     | A      |
| 1N747A  | LOGO   | 47     | A      |
| 1N748A  | LOGO   | 48     | A      |
| 1N749A  | LOGO   | 49     | A      |
| 1N750A  | LOGO   | 50     | A      |
| 1N751A  | LOGO   | 51     | A      |
| 1N752A  | LOGO   | 52     | A      |
| 1N753A  | LOGO   | 53     | A      |
| 1N754A  | LOGO   | 54     | A      |
| 1N755A  | LOGO   | 55     | A      |
| 1N756A  | LOGO   | 56     | A      |
| 1N757A  | LOGO   | 57     | A      |
| 1N758A  | LOGO   | 58     | A      |
| 1N759A  | LOGO   | 59     | A      |

## Top Mark Information (Continued)



1<sup>st</sup> line: F - Fairchild Logo

2<sup>nd</sup> line: Device Name - 4<sup>th</sup> to 5<sup>th</sup> characters of the device name.  
or 5<sup>th</sup> to 6<sup>th</sup> characters for BZXyy series

3<sup>rd</sup> line: Device Name - 6<sup>th</sup> to 7<sup>th</sup> characters of the device name.  
or Voltage rating for BZXyy series

## General Requirements:

1.0 Cathode Band

2.0 First Line: F - Fairchild Logo

3.0 Second Line: Device name - For 1Nxx series: 4<sup>th</sup> to 5<sup>th</sup> characters of the device name.  
For BZxx series: 5<sup>th</sup> to 6<sup>th</sup> characters of the device name.

4.0 Third Line: Device name - For 1Nxx series: 6<sup>th</sup> to 7<sup>th</sup> characters of the device name.  
For BZXyy series: Voltage rating

5.0 Maximum no. of marking lines: 3

6.0 Maximum no. of digits per line: 2

7.0 FSC logo must be 20 % taller than the alphanumeric marking and should occupy the 2 characters of the specified line.

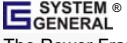
8.0 Marking Font: Arial (Except FSC Logo)

9.0 First character of each marking line must be aligned vertically.



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| Build it Now™                                                                       | FRFET®                                                                              | Programmable Active Droop™                                                          | the power franchise                                                                   |
| CorePLUS™                                                                           | Global Power Resource™                                                              | QFET®                                                                               | TinyBoost™                                                                            |
| CorePOWER™                                                                          | Green FPS™                                                                          | QS™                                                                                 | TinyBuck™                                                                             |
| CROSSVOL™                                                                           | Green FPS™ e-Series™                                                                | Quiet Series™                                                                       | TinyLogic®                                                                            |
| CTL™                                                                                | GTO™                                                                                | RapidConfigure™                                                                     | TINYOPTO™                                                                             |
| Current Transfer Logic™                                                             | IntelliMAX™                                                                         |  ™ | TinyPower™                                                                            |
| EcoSPARK®                                                                           | ISOPANAR™                                                                           | Saving our world, 1mW/W/kW at a time™                                               | TinyPWM™                                                                              |
| EfficientMax™                                                                       | MegaBuck™                                                                           | SmartMax™                                                                           | TinyWire™                                                                             |
| EZSWITCH™ *                                                                         | MICROCOUPLER™                                                                       | SMART START™                                                                        | TriFault Detect™                                                                      |
|  ™ | MicroFET™                                                                           | SPM®                                                                                | TRUECURRENT™                                                                          |
|  ® | MicroPak™                                                                           | STEALTH™                                                                            | µSerDes™                                                                              |
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| FACT®                                                                               | OPTOLOGIC®                                                                          | SuperSOT™-8                                                                         | UniFET™                                                                               |
| FAST®                                                                               | OPTOPLANAR®                                                                         | SupreMOS™                                                                           | VCX™                                                                                  |
| FastvCore™                                                                          |  ™ | SyncFET™                                                                            | VisualMax™                                                                            |
| FlashWriter® *                                                                      | PDP SPM™                                                                            |  ™ | XS™                                                                                   |
| FPS™                                                                                | Power-SPM™                                                                          | The Power Franchise®                                                                |                                                                                       |
| F-PFS™                                                                              | PowerTrench®                                                                        |                                                                                     |                                                                                       |
|                                                                                     | PowerXS™                                                                            |                                                                                     |                                                                                       |

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|--------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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